I. REMARKS

Preliminary Remarks

Upon entry of the current Amendment, claims 16, 17, and 20 will be pending, of which claim 16 is independent. This response is filed concurrent with a request for continued examination (RCE) along with the requisite fee.

Patentability Remarks

Rejections under 35 U.S.C. §102 –

Claims 16, 17, and 20 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Lagarde *et al.* (U.S. Pat. No. 4,704,425) or Johnson *et al.* (U.S. Pat. No. 4,681,750). The applicants respectfully traverse.

The examiner alleges that the reported values for the silica of Example 4 of Lagarde *et al.* differ from those shown in column 15 of Lagarde *et al.*, which appears to indicate a large experimental error that would place the DBP/CTAB ratio in the claimed range (Advisory Action dated December 26, 2002). The applicants respectfully disagree with the examiner's reasoning.

One reason for the differences between the values reported in Example 4 of Lagarde *et al.* and those obtained by the applicant is that there is important information missing in Example 4, in particular the drying, crushing, and micronizing of the silica. It is well-known in that art that these techniques, especially the drying method, greatly influence the surface of silica.

In the declaration under 37 C.F.R. §1.132 dated December 16, 2002, Dr. Görl (one of the inventors) declared that the silica in the present invention was prepared exactly as described in Example 4 of Lagarde *et al.* All the parameters mentioned in Example 4 were carefully taken in account. Steps and parameters *not* described in Example 4, however, were chosen or performed as a skilled artesian would have done at the time Lagarde *et al.* was filed.

Two, there are different methods for the determination of BET. The BET obtained by the applicant was determined according to ISO 5794/Annex D, which is a single-point method. The method by which the determination of BET in Lagarde *et al.* was accomplished is indefinite because the cited literature in column 2, lines 38-42 (*J. Am. Chem. Soc.* **60**, 309,

1938) fails to point out whether the BET was determined by a single-point or a multi-point method. The multi-point leads to higher BET surfaces. Therefore, the single-point method (described in ISO 5794/Annex D) was used for the determination of the BET surface of the silica according Example 4 in order to make the silica of Example 4 comparable to the silica of the present invention.

Third, it is also well known in the art that the values of silica may vary when the same silica is produced by different apparatus. There are parameters (e.g., the surface of the apparatus) which may not be controlled by the operator and which were consequently neither determined nor mentioned in Example 4. All these issues would account for the differences between the BET surface reported in Example 4 and the value obtained by the applicant.

Fourth, the difference in BET value between Example 4 of Lagarde *et al.* and the present invention are unique for this parameter. The BET surface determined by Dr. Görl (200 m^2/g) differs by 20% from the value reported in Example 4 (240 m^2/g). One of ordinary skill in the art would expect this percentage error for all the parameters. However, the PV ratio determined by Dr. Görl (0.62) is nearly 35% higher than the maximum value of the pending claims (0.46). This difference cannot be caused by experimental error especially considering that the experiments were performed by an expert in the field of silica chemistry. Therefore, the examiner's conclusion that the other values like PV ratio or Silanol group density may have similar divergences is inaccurate.

Fifth, the Silanol group density increases when the surface area increases (see Sears, *Anal. Chem.* **12**, 1981-1983, 1956; cited on page 2 of the present application). Consequently the Silanol group density has to be higher than 21.6 when the BET surface changes from 200 m^2/g to 240 m^2/g. In other words, the Silanol group density of a silica having a BET surface of 240 m^2/g will be further away from the range claimed in the present application.

For the reasons given above, claims 16, 17, and 20 are not anticipated by Lagarde *et al.*, and the applicants respectfully request removal of this rejection.

In the Advisory Action, the examiner did not further address the applicants arguments over Johnson *et al.* These arguments are repeated herein for completeness.

The examiner argued that the process of producing silicas disclosed in Johnson *et al.* is essentially the same as the process used by applicants. This is factually incorrect as was explained in the previously filed declaration (filed October 15, 1998).

Specifically, the precipitations used for preparing silicas in Johnson *et al.* are: a) performed at a significantly different pH than the applicants procedure; b) use a multistage, rather than a single-stage, method; and c) are carried out at a significantly lower solid concentration. Therefore, the examiner's allegations that the silicas disclosed in Johnson *et al.* must be the same as those in the pending claims is entirely unjustified.

For the reasons given above, claims 16, 17, and 20 are not anticipated by Johnson *et al.*, and the applicants respectfully request removal of this rejection.

Rejections under 35 U.S.C. §103 –

Claims 16, 17, and 20 were rejected under 35 U.S.C. §103(a) as allegedly being obvious over Lagarde *et al.* or Johnson *et al.* The applicants respectfully traverse.

The examiner appears to base the rejections under 35 U.S.C. §103(a) on the allegation that the silicas of the pending claims inherently possess the properties of those in Lagarde *et al.* or Johnson *et al.* In paragraphs 8 and 9 of the declaration dated December 16, 2002, Dr. Görl repeats the conclusions of the previously submitted declarations that the silicas of the present invention produce products with superior properties. He also indicated that the examiner's argument that, given the BET, CTAB and BET/CTAB values disclosed in Lagarde *et al.*, all of the other properties of the presently claimed silicas are fixed, *i.e.*, inherent, is factually incorrect. As noted above, many of the properties of the silicas in claims 16, 17, and 20 are not anticipated by Lagarde *et al.* or Johnson *et al.* In the absence of any explanation as to why the remaining properties would be obvious, a rejection under 35 U.S.C. §103 cannot reasonably be maintained and the applicants respectfully request removal of this rejection.

II. CONCLUSION

In view of the foregoing, the claims are now believed to be in form for allowance, and such action is hereby solicited. If any point remains in issue that the examiner feels may be best resolved through a personal or telephone interview, the examiner is strongly urged to contact the undersigned at the telephone number indicated below.

Respectfully submitted,

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